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Response of zinc and boron application on fruit set, quality and yield of apple (*Mallus* × *domestica* Borkh.) cv. Red Delicious under hilly conditions of Uttarakhand

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ABSTRACT : The influence of zinc sulphate and boric acid on growth, yield, and quality of apple cv. Red Delicious was investigated during the years 2014. Spraying of zinc sulphate and boron acid in combination with soil application resulted in increment of fruit set, fruit retention and yield attributing traits concerning to the spraying of 0.2 % boric acid + 0.1 % zinc sulphate in combination with 20 g boric acid /tree as soil application which achieved great response. Significant increasing contents of TSS, ascorbic acid, total sugars, and non-reducing sugars were recorded under treatments T_7 (spraying of 0.2 per cent boric acid + 0.1 per cent zinc sulphate and soil application of 20 g boric acid/tree). Decreasing of titratable acidity contents and physiological loss in weight related to 0.2 per cent boric acid + 0.1 per cent zinc sulphate and 20 g boric acid/tree as soil application. Improving quality and marketable price of apple fruits is the important target for all apples cultural, thus application of micronutrients as foliar spraying and soil application were recommended to increasing fruits quality of apple cv. Red Delicious.

Key Words : Apple (*Mallus* × *domestica* Borkh.) cv. Red Delicious, zinc, boron, quality and yield.